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one or more intermediate appliances having geometries selected to progressively reposition the teeth from the first intermediate arrangement to successive intermediate arrangements; and

a final appliance having a geometry selected to progressively reposition the teeth from the last intermediate arrangement to the final tooth arrangement;

wherein the surface of each appliance has a lubricious composition coupled thereto.

- 40. (New) A system as in claim 30, wherein the appliances comprise polymeric shells having cavities shaped to receive and resiliently reposition teeth from one arrangement to a successive arrangement.
- 41. (New) A system as in claim 40, wherein the tooth positions defined by the cavities in each successive appliance differ from those defined by the prior appliance by no more than 2 mm.
- 42. (New) A system as in claim 39, comprising at least two intermediate appliances.
- 43. (New) A system as in claim 42, comprising at least ten intermediate appliances.
- 44. (New) A system as in claim 43, comprising at least twenty-five intermediate appliances.
- 45. (New) A method for repositioning teeth from an initial tooth arrangement to a final tooth arrangement, said method comprising:

placing a first incremental position adjustment appliance in a patient's mouth, wherein the first appliance has a geometry selected to reposition the teeth from the initial tooth arrangement to a first intermediate arrangement;

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successively replacing one or more additional appliances, wherein the additional appliances have geometries selected to progressively reposition the teeth from the first intermediate arrangement to successive intermediate arrangements; and

placing a final appliance into the patient's mouth, wherein the final appliance has a geometry selected to progressively reposition the teeth from the last intermediate arrangement to the final tooth arrangement, wherein the surface of each appliance has a lubricous composition coupled thereto.

- 46. (New) A method as in claim 45, wherein the appliances comprise polymeric shells having cavities shaped to receive and resiliently reposition teeth from one arrangement to a successive arrangement.
- 47. (New) A method as in claim 46, where the tooth positions defined by the cavities in each successive appliance differ from those defined by the prior appliance by no more than 2 mm.
- 48. (New) A method as in claim 45, wherein the successively placing step comprises placing at least two additional appliances prior to placing the final appliance.
- 49. (New) A method as in claim 48, wherein the successively placing step comprises placing at least ten additional appliances.
- 50. (New) A method as in claim 45, wherein the successively placing step comprises placing at least twenty-five additional appliances.
- 51. (New) A method as in claim 45, wherein the appliances are successively replaced at an interval in the range from 2 days to 20 days.
- 52. (New) An improved method for repositioning teeth using appliances comprising polymeric shells having cavities shaped to receive and resiliently

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reposition teeth to produce a final tooth arrangement, wherein the improvement comprises determining at the outset of treatment geometries for at least three appliances which are to be worn successively by a patient to reposition teeth from an initial tooth arrangement to the final tooth arrangement and coating the interior of each of the polymeric shells with a lubricous composition.

- 53. (New) An improved method as in claim 52, wherein at least four geometries determined at the outset.
- 54. (New) An improved method as in claim 53, wherein at least ten geometries are determined at the outset.
- 55. (New) An improved method as in claim 54, wherein at least twenty-five geometries are determined at the outset.
- 56. (New) An improved method as in claim 52, wherein the tooth positions defined by the cavities in each successive geometry differ from those defined by the geometry by no more than 2 mm.

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